

PROGRAM YEAR 2008-2009

PERFORMANCE REPORT

ON

CAREER AND TECHNICAL EDUCATION
IN NEW HAMPSHIRE

New Hampshire Department of Education

I. Implementation of State Leadership Funds

Required Uses of Funds:

Assessing Career and Technical Education Programs

New Hampshire, Vermont, and Rhode Island received technical assistance from MPR, Incorporated, that was sponsored by the US Department of Education. The assistance focused on improving the performance of secondary CTE students on the two academic attainment assessments, English/language arts and math, as required by the No Child Left Behind Act (NCLB). Many of the challenges identified in this project were shared by other states, such as having the assessments take place at the very beginning of a student's enrollment in a CTE program, before students have received the CTE instruction.

Recommendations from MPR highlighted three activities:

- Formalize a consortium of the states affected (i.e., New Hampshire, Vermont, and Rhode Island);
- Increase the visibility of academic content in CTE coursework;
- Align more closely the definitions used by each state for accountability purposes.

Developing, Improving, or Expanding the Use of Technology

Sixty-five secondary CTE instructors attended "Alice Workshops" during the year, learning how to use a simple, flexible programming software in the classroom. Alice allows teachers to use computer animation at any level to build teaching units. Attendees also learned how to instruct students in the use of Alice to generate animated presentations.

An all-day training on new and emerging developments in agriculture took place in June of 2009 and gave secondary instructors the chance to have some hands-on experience with the latest technology in two areas:

- Genetically modified organisms—teachers learned about the science behind this growing technology, surveyed regulations on production and sales, and gained some experience in a laboratory that tested local foods.
- Pharming—instructors learned about genetically altering plants and animals to create pharmaceuticals, about the technology behind this emerging field, and about research that is now underway.

Postsecondary instructors received training in developing on-line courses and making more use of the Internet for professional development. An outstanding example is the community college in Nashua, New Hampshire, where three certificate and three associate programs have gone 100% on-line. During the summer of 2009, week-long

workshops were conducted to help additional career and technical instructors develop more on-line courses.

Offering Professional Development

The Career Development Bureau provided extensive professional development in the use of a new system for secondary data management. Known as the Career and Technical Education (CATE) system, CATE will substantially improve secondary CTE data collection and reporting. CATE was first piloted at five secondary CTE centers during the 2008-09 program year. Based on early results from the pilots, professional development began for all centers statewide in November of 2008 in preparation for CATE to be fully implemented by September of 2009.

Postsecondary professional development focused on attracting and retaining quality instructors who transfer to teaching from business and industry. The "Adjunct Certification Program" was created to grant a certificate to new faculty after an intensive course of study in classroom management, course-development skills, and assessment techniques. Starting with Academic Year 2009-10, all adjunct faculty members who seek a promotion must complete this program.

Tech Prep took the lead in providing professional development to a wide variety of educators on building secondary-postsecondary linkages. Seventy-one teachers, guidance counselors, career counselors, School-to-Work/Work-Based Learning counselors, college staff, and state and local CTE administrators completed the training program to earn a nationally recognized Career Pathways Leadership Certificate.

State Leadership funds also supported training to make more use of CTE in developing local secondary Alternative Learning Plans (ALP). A newly enacted state statute required local school boards to review and approve alternative ways for students to gain credits toward graduation. The statewide Dropout Prevention and Recovery Council formed partnerships with local CTE centers in developing these alternatives for students. During the year, professional development was then provided to LEA's on methods of integrating CTE into students' ALP's.

Integrating Academics with Career and Technical Education

Beginning in Program Year 2008-09, New Hampshire joined Vermont and Rhode Island in working with MPR Associates to design professional development that helps secondary CTE centers improve performance on the two academic content assessments required by the No Child Left Behind Act: English/language arts and math. MPR facilitated multi-state discussions about the timing of the academic assessments, responsibility for academic accountability, comparable definitions across states, and overall perceptions of CTE that influence the academic performance of CTE students. MPR's recommendations included:

- Formalizing a multi-state consortium;
- Increasing the visibility of academic content within CTE coursework;

- Moving toward more comparable accountability definitions and academic performance measures.

The Bureau of Career Development adopted the Math-in-CTE model to provide year-long, sustained professional development to pairs of CTE and academic instructors. During the year, the State completed its first full year of statewide implementation in two content areas: building trades and automotive technology. Teachers from both CTE and academic instruction met during the year to map the CTE curriculum, identify the math that naturally exists in these programs, and develop several math-enhanced lessons for the CTE classroom. For Program Year 2009-10, the State will expand to Culinary Arts and Marketing CTE programs.

During the year, a postsecondary threshold mathematics course designed to reduce the need for remediation was developed by educators at both the secondary and postsecondary levels of CTE. Math curricula at both levels were aligned so students could move seamlessly from high school to college with the necessary mathematical foundation to succeed in college. Teams of secondary and postsecondary instructors reviewed and revised their offerings, resulting in the creation of two new secondary mathematics courses.

Exposing Special-Population Students to High-Skill, High-Wage Occupations

A survey of directors of secondary CTE centers showed that the center staff were much more likely to see nontraditional programs as important than as unimportant. This view did not, however, translate into desires for more specific forms of professional support. When asked specifically about particular types of training, the largest number of center directors expressed an interest in receiving support on-site rather than in a more formal conference setting.

Near the end of the program year, New Hampshire became a member of the National Alliance of Partners in Equity (NAPE). The alliance was expected to increase access to information on best practices in nontraditional programming, particularly at the local level.

Late in the program year, New Hampshire began organizing and planning a STEM Equity Pipeline initiative for the 2009-10 Program Year. Following the STEM Equity Pipeline model, planning focused on a train-the-trainer approach toward professional development. By the end of June, a Leadership Team was formed and starting discussions of the initiative.

Supporting Partnerships

New Hampshire received a \$62,280 grant during the program year to develop Rigorous Plans of Study (RPOS) focusing on health sciences and accounting programs. This initiative involved work in three areas:

- Gaining business and industry input on the competencies that each of the programs must address;
- Strengthening partnerships between secondary and postsecondary levels of CTE through statewide articulation;
- Putting the initiative into practice.

The RPOS initiative resulted in two professional development workshops during the program year. The workshops oriented partners from secondary schools, postsecondary institutions (two- and four-year), and educational administrators to the initiative. By the end of the year, curriculum-specific teams had formed and were planning a summer institute to align the accounting and health sciences curricula between secondary and postsecondary programs.

During the year, the Community College System of New Hampshire (CCSNH) was recognized for its partnership with Cisco Systems, Incorporated. Of the 9000 Cisco Networking Academies located in 160 countries, serving 700,000 students, New Hampshire's two-year system was ranked among the top 5% of all academies. Criteria for this recognition included:

- Steadily growing enrollments;
- High instructor effectiveness ratings from students;
- Widespread student satisfaction with the program.

Serving Individuals in State Institutions

Grants were awarded to two correctional institutions during the year. Two grants were awarded to the Strafford County House of Corrections to serve female and male inmates, through two separate programs. A grant was also awarded to the Hillsborough County House of Corrections. Although grants were announced and let for separate grants to serve each gender, most proposals sought support for programs serving male prisoners, a disparity that continues to challenge the types and amounts of support for state institutions.

Supporting Programs for Special Populations

New Hampshire's community college system focused on the following initiatives to improve supports for students from special populations:

- Improving academic gains through a number of supports for individuals with disabilities, such as assessments, peer and faculty tutoring, and career counseling;
- Removing barriers to accessing instruction and financial aid for individuals from economically disadvantaged families;
- Renewed emphasis on creating a gender balance in program participation and completion for individuals preparing for nontraditional careers;
- Creating a drop-in center designed around the TRIO program for single parents and students with limited English proficiency.

As mentioned earlier, female students in programs nontraditional for their gender will benefit from training delivered through the STEM initiative. At a June 2008 meeting, for example, grant funds were used to develop a workshop on improving gender equity in STEM programs.

Offering Technical Assistance to Eligible Recipients

The assistance sponsored by OVAE and delivered by MPR, Inc. during the program year has not yet been translated into technical assistance for eligible recipients throughout the state. To the extent that the assistance from MPR focused on multi-state challenges, the assistance provided helpful recommendations to all three states. The recommendation on how states can help schools raise academic performance, however, has yet to be put into practice.

Permissible Activities:

Guidance and Counseling Assistance

Staff from secondary CTE centers and from all community colleges participated in training on New Hampshire's Career Pathway Plans of Study (CPPOS). The training was designed for teams representing secondary and postsecondary programs. The teams learned how to design CPPOS's that inform students and parents of the secondary courses that students need to take to be well prepared for college programs. Feedback from participants indicated overall satisfaction with the program, with participants frequently reporting improved relations between the secondary centers and postsecondary institutions.

Supporting Partnerships with Business

One of the more effective state-level initiatives that attracted business partners was the Rigorous Plan of Study project. The project concentrated on the health sciences and accounting program areas, and during its first year, the initiative recruited many employers in the health care and accounting professions. During Program Year 2009-10, the focus will continue to be on health sciences and accounting.

Supporting the Improvement or Development of New Courses and Initiatives

Nine secondary CTE centers submitted applications for state approval of ten new programs. Outcomes of these applications were as follows:

Proposed Program	Application Status
Engineering	Full Approval
Cosmetology	Full Approval
Video Production	Conditional Approval
Animal Science	Conditional Approval
Security and Protective Services	Conditional Approval
Advanced Manufacturing	Conditional Approval
Biotechnology	Conditional Approval
Radio & TV Broadcasting Technology	Conditional Approval
Engineering	Conditional Approval
Welding Technology	Non Approval

Conditional approval meant that the applicant was given one year to finish planning the proposed program.

Providing CTE to Adults and Dropouts to Complete Secondary Education

A Concord diploma Academy was formed during the year to help students at risk of dropping out. The academy gives at-risk students the option to earn their diplomas through alternative means. Each semester the academy offers a combination of CTE/core academics instruction known as the Technology Application Program. Programs that pair CTE and academic classes include Criminal Justice/Biology and Building Construction/Mathematics.

In a new, promising venture, the CCSNH partnered with the Virtual Academy to offer web-based instruction. Enrollees could complete their diploma programs and/or recoup lost credits. Through this program, unemployed adult learners could also access instruction that would help them return to the workforce.

Developing Valid and Reliable Assessments of Technical Skills

Much has been accomplished in this area during the program year. In general, New Hampshire began replacing the older system of local assessments based on state-approved competencies with a newer system of industry based or state-level assessments. The assessments by industry or states were judged to be much more valid because they were developed by employers or state agencies, and reliable because the same test was used under identical protocols each time the test was offered. Additional detail on this work is described in the next section of this report.

Developing and Enhancing Secondary Postsecondary Data Systems

New Hampshire made significant progress in developing a system for tracking Tech Prep students from high school to college.

During Winter 2008, an initial match was conducted between a list of secondary Tech Prep graduates and student records of enrollees at the CCSNH. The number of

“successful” matches in this test was lower than expected and the need for conducting matches with another, larger database became obvious.

In the closing months of Program Year 2008-09, work began on a two-phase project to expand the sources of information for tracking Tech Prep students who continue on to college.

- First, information already gathered by the NH Department of Education from the National Student Clearinghouse was used to identify Tech Prep students at the postsecondary level; A list of secondary Tech Prep program completers was matched against the Department’s i4see data base, where Clearinghouse data were appended to students’ records.
- Second, a list of secondary Tech Prep graduates was matched against two years of enrollment information (2007-08 and 2008-09) from the state’s community college system’s student information system to identify any additional Tech Prep students and to verify the validity and completeness of information gained from the CCSNH.

This second effort to improve the quality of Tech Prep data was more successful; 95% of all secondary CTE Tech Prep program completers had been identified in the postsecondary records, of whom 53.67% were listed as continuing their education in college.

Progress continued on developing the new web-based reporting system for secondary CTE centers, the Career and Technical Education (CATE) system. A pilot test was conducted with five secondary centers during the program year. Early results from the pilot informed subsequent statewide training in use of the CATE system. A general orientation to CATE was distributed in November of 2008 and six trainings were provided in March and April of 2009. Starting with Program Year 2009-10, all secondary centers in the state will use the CATE system.

II. Progress in Developing and Implementing Technical Skills Assessments

New Hampshire began introducing industry and state credential assessments during the program year, starting with the health sciences. For School Year 2008-09, the Emergency Medical Technician and Licensed Nursing Assistant credentials were used to measure secondary technical skill attainment in the health sciences program area. Previously, assessments were administered by local instructors, using locally developed assessments based on competencies that were defined at the state level. By their nature, these assessments suffered problems with validity and reliability: the assessments were not evaluated for validity, and reliability was compromised as each instructor used his/her own assessments. The number of all secondary students taking technical skill assessments during PY 2008-09 equaled 5.19% of all students who could have taken the tests that year.

The following chart details the plan for introducing industry or state skill assessments in the coming years.

School Year	Action Steps
2009-10	Pilot assessments in health sciences, automotive, and accounting program areas;
2010-11	Fully implement assessments in accounting, health sciences, and automotive program areas;
2011-12	Fully implement three assessments.

Postsecondary assessments of technical skills also began to shift from faculty based tests to industry or state-level skill assessments. Again in the health-related area, the postsecondary technical skill assessment for Nursing, the NCLEX, was introduced. Results from an additional technical skill assessment will be included in the 2009-2010 CAR.

III. Implementation of State Improvement Plans

No State Improvement Plan was needed because New Hampshire's statewide performance did not fall short of the 90% threshold on any indicator.

IV. Implementation of Local Program Improvement Plans

At the close of PY 08-09, all centers performed at a level that was greater than 90% of the goal for all indicators.

V. Tech Prep

Tech Prep funds were granted on a non-competitive, formula basis. Grants were allocated on the basis of work that each consortium was to complete for the next year. The work to be accomplished during the year was negotiated between the State and the consortia.

Four consortia received Tech Prep funds. The following chart identifies these consortia and their respective grant amounts:

Consortium	Grant Amount
North Country Tech Prep Partnership	\$112,000.00
Eastern Tech Prep Partnership	\$112,000.00
Southern New Hampshire School-to-Work Partnership.	\$112,000.00
Information Technology and Manufacturing Partnership	\$111,999.93

Secondary Tech Prep students exceeded New Hampshire's performance goals on all indicators. As the table below indicates, Tech Prep students exceeded performance goals by the largest margins on Secondary School Completion and Mathematics. Career clusters where Tech Prep

students exceeded performance goals the most were the Finance and the Information Technology clusters.

Indicator	Tech Prep	State Goal	Variance
Reading/Language Arts	78.88%	74.00%	4.88 pts.
Mathematics	70.83%	56.00%	14.83 pts.
Technical Skills Attainment	81.44%	40.44%	41.00 pts.
Secondary School Completion	97.06%	85.00%	12.06 pts.
Graduation Rate	83.61%	74.00%	9.61 pts.
Placement	55.14%	50.00%	5.14 pts.
Nontraditional Program Participation	22.46%	22.13%	0.33 pts.
Nontraditional Program Completion	20.83%	18.60%	2.23 pts.

Unfortunately, the data reported on Tech Prep performance were drawn from SY 2007-08 and not from the most recent full year, 2008-09. With only one year of data, no opportunity existed to compare a second year of performance against goals. The SY 08-09 performance data were not available because New Hampshire's CTE information system was undergoing significant renovation and upgrade during the year. The result was an absence of performance data (i.e., second year of performance measurements) that could be compared to performance goals. The following tables show how Tech Prep consortia performed on the accountability measures identified in Sec. 203.

Secondary Tech Prep

Indicator	Performance
Postsecondary Enrollment (ISTP1),	55.14%
Program-Related Postsecondary Enrollment (1STP2),	N/A
Certification/Licensure (1STP3),	81.44%
Dual Credit Attainment (1STP4),	27.53%
Remedial math, writing, or reading (1STP5).	6.88%

Postsecondary Tech Prep

Indicator	Performance
Post-graduation Employment (1PTP1),	N/A
Certification/Licensure (1PTP2),	N/A
Two-year College Program Completion (1PTP3),	N/A
Four-year College Program Completion (1PTP4).	N/A